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36. (new) A vector comprising the isolated nucleic acid of claim 33, 34, or 35.

37. (new) An isolated cell containing the nucleic acid of claim 33, 34, or 35.

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38. (new) An isolated nucleic acid comprising a nucleotide sequence which encodes a polypeptide comprising at least one of the amino acid sequences selected from the group consisting of: amino acids 1-23, 24-126, 127-225, 226-316, 317-409, 410-506, 507-603, 604-697, 698-792, 793-887, 888-983, 984-1068, 1069-1185, 1186-1281, 1282-1375, 1376-1471, 1472-1594, 1595-1616, and 1617-1910 of SEQ ID NO:2.

39. (new) A vector comprising the isolated nucleic acid of claim 38.

40. (new) An isolated cell containing the nucleic acid of claim 38 or 39.

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41. (new) An isolated nucleic acid molecule comprising a nucleotide sequence set forth in SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, nucleotides 453-6185 of SEQ ID NO:1 or nucleotides 453-5168 of SEQ ID NO:1.

42. (new) A vector comprising the isolated nucleic acid of claim 41.

43. (new) An isolated cell containing the nucleic acid of claim 41 or 42.

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44. (new) An oligonucleotide comprising at least 15 nucleotides of (a) a nucleotide sequence that encodes the polypeptide of SEQ ID NO:11; (b) the nucleotide sequence set forth in SEQ ID NO. 7 or 8; or (c) the complement of the nucleotide sequence of (a) or (b).

45. (new) The oligonucleotide of claim 44 wherein the oligonucleotide sequence consists essentially of SEQ ID NO:5 or SEQ ID NO:6.

46. (new) A kit for detecting the presence of a nucleic acid in a sample comprising in a package at least one oligonucleotide of claims 44 or 45.

47. (new) The isolated nucleic acid of claim 1, 33, 34, 35, 38 or 41 which is cDNA.

48. (new) The isolated nucleic acid of claim 1, 33, 34, 35, 38 or 41 which is RNA.

49. (new) A method for making of a Down Syndrome-Cell Adhesion Molecule polypeptide or fragment thereof, said method comprising the steps of culturing the cell of claim 32, 37, 40 or 43 under conditions suitable for expression of said Down Syndrome-Cell Adhesion Molecule protein, and isolating the expressed Down Syndrome-Cell Adhesion Molecule protein.--

REMARKS

Claims 2-10, 12, 20 and 30 have been canceled by the Applicant without prejudice, and have been replaced with new claims 31-49. The new claims are fully supported in the specification as filed. In addition, claim 1 has been amended to more particularly point out and distinctly claim the invention. Claims 31, 32, 36, 37, 39, 40, 42 and 43 are supported on page 27 line 16 to page 31 line 11. Claim 38 is supported throughout the specification and in Figure 2. Claim 41 is supported on page 13, lines 25 to 34. Claims 33, 34 and 35 are supported on page 16 line 23 to 32. Claims 44 and 45 are supported on page 58 line 9 to page 59 line 2. Claim 46 is supported on page 45 line 12 to page 46 line 8. Claims 47 and 48 are supported in the specification at page 12 line 23